IN THE CLAIMS

1-103 (canceled)

104. (currently amended) A mixture comprising:

A) at least one electrically conductive or semiconducting element or compound selected from the group consisting of a), b), or c), wherein the mixture comprises at least 4.5 to 60% by weight of a), wherein

a) is at least one electrically conductive or semiconducting metallic particle having an essential content of metallic particles of at least one of tin metal or a tin alloy ~~selected from the group consisting of tungsten, molybdenum, tantalum and niobium and alloys thereof,~~

b) is at least one electrically conductive or semiconducting polymeric compound or a mixture ~~compounds or any mixtures of these or derivatives~~ thereof; and

c) is at least one electrically conductive or semiconducting amine-or ammonium-containing compound;

wherein A) is present in an amount of from ~~form~~ 4.5 to 70wt% of the mixture, ~~mixture.~~

and

B) is at least one binder;

C) is at least one crosslinking agent, a photoinitiator, or a mixture thereof whereby the content of said binder or crosslinking agent is in the range form 16 to 42% by weight, and

D) is at least one of an organic solvent or water;

wherein the total weight of component A) is from 0.5 to 70 wt.% based on the total weight of the mixture, ~~and~~ wherein the mixture is free of carbon black and wherein a) is capable of sliding and wherein the mixture is a liquid, is substantially free of chromium ~~carbon black, and is for a chromate free process.~~

105. (previously presented)A mixture according to claim 104, wherein a mixture of all electrically conductive or semiconducting particles a) has an average particle size d_{50} in the range from 0.1 to 4.0 microns.

106. (previously presented)A mixture according to claim 104, wherein a mixture of all electrically conductive or semiconducting particles a) has an average particle size d_{50} in the range from 0.2 to 4.0 microns.

107. (previously presented)A mixture according to claim 104, wherein a mixture of all electrically conductive or semiconducting particles a) has an average particle size d_{50} in the range from 0.1 to 4.5 microns.

108. (currently amended) A mixture according to claim 106, wherein said average particle size d_{50} is ~~ranges from 0.2 to~~ 3.5 microns.

109. (currently amended) A mixture according to claim 104 ~~105~~, wherein particles A) have an average particle size d_{50} of from 0.2 to 3.5 microns. ~~at least 10 wt.% of the electrically conductive or semiconducting hard particles a) are oxides or phosphides substantially comprising at least one of aluminum, iron, cobalt, copper, manganese, molybdenum, nickel, niobium, tantalum, titanium, vanadium, tungsten, zinc or tin~~

110. (currently amended) A mixture according to claim 104, wherein particles A have an average particle size d50 of 0.2 microns. ~~106, wherein at least 10 wt.% of the electrically conductive or semiconducting hard particles a) are oxides or phosphides substantially comprising at least one of aluminum, iron, cobalt, copper, manganese, molybdenum, nickel, niobium, tantalum, titanium, vanadium, tungsten, zinc or tin~~

111. (currently amended) A mixture according to claim 104, further comprising metallic particles of at least one of aluminum, tungsten, zinc or alloys thereof. ~~wherein the~~

~~electrically conductive or/and semiconducting hard particles a) comprise substances based on compounds or mixture of compounds with or of spinels, or substances based on borides, carbides, oxides, phosphates, phosphides, silicates, silicides or particles having an electrically conductive coating or a mixture thereof or a compound thereof.~~

112. (currently amended) A mixture according to claim 104, wherein the mixture includes a reactive binder system which can substantially or completely cure on a belt installation at a temperature below 250°C PMT. ~~at least 10 wt.% of the electrically conductive or semiconducting hard particles a) are oxides or phosphides substantially comprising at least one of aluminum, iron, cobalt, copper, manganese, molybdenum, nickel, niobium, tantalum, titanium, vanadium, tungsten, zinc or tin.~~

113. (previously presented)A mixture according to claim 104, wherein component a) comprises molybdenum.

114. (previously presented)A mixture according to claim 104, wherein compound b) is at least one of polyaniline, polypyrrote, polythiophenene or a mixture thereof.

115. (previously presented)A mixture according to claim 104, containing at least one electrically conductive or semiconducting compound c), that is a tertiary amine, an ammonium compound or derivative thereof.

116. (previously presented)A mixture according to claim 104, comprising not more than 1.5 wt.% of wax or of substances having wax-like properties.

117. (previously presented)A process comprising applying the mixture of claim 104 to a substrate, optionally drying or at least partly crosslinking the mixture as a result of which a coating of which the average layer thickness in the dry state is not more than 6 µm, measured in

the dry state microscopically on a ground cross-section, is produced on the substrate, wherein the process is chromium free, to yield a coated substrate.

118. (previously presented)The process of claim 107, wherein the substrate is precoated.

119. (previously presented)A process according to claim 117, wherein the electrically conductive or/and semiconducting hard particles a) are ground by themselves.

120. (previously presented)A process according to claim 117, wherein the coating is produced with a mixture in which the mixture of all the types of particles a) has a particle passage value d_{80} which is no greater than the layer thickness of the dry coating produced therewith.

121. (previously presented)A process according to claim 117, wherein on grinding of the electrically conductive or/and semiconducting hard particles a), the over-sized particles are predominantly comminuted, so that a narrower particle size distribution arises.

122. (previously presented)A process according to claim 117, wherein the particle size passage value d_{99} of the electrically conductive or semiconducting hard particles a) is not substantially greater than, no greater than or only slightly less than the average thickness of the coating.

123. (previously presented)A process according to claim 117, wherein the applied mixture is dried, stoved, irradiated with free radicals or heated in order to form a thoroughly crosslinked, corrosion-resistant, viscoelastic coating.

124. (currently amended) A process according to claim 117, wherein the resultant coating has a thickness of less <u>than 6</u> ~~than 10~~ μm.

125. (previously presented)A process according to claim 117, wherein the mixture is free or substantially free from organic lubricants.

126. (previously presented)A process according to claim 117, wherein the substrate comprises at least one metal or metal alloy.

127. (previously presented)A process according to claim 117, wherein the mixture according to the invention is applied directly to a pretreatment coating or said substrate.

128. (currently amended) The coated substrate ~~product~~ prepared by the process of claim 117.

129. (currently amended) The coated ~~A metal~~ substrate ~~coated with product~~ of claim 128 wherein the substrate is metal also.

130. (previously presented)A process according to claim 117, wherein said mixture is free from at least one of PTFE, silicone, inorganic acids, silicone oil, organic acids, heavy metals, arsenic, lead, cadmium, chromium, cobalt, copper or nickel.

131. (previously presented) A process according to claim 117, wherein said substrate comprises at least one of aluminum, iron, magnesium or steel.

132. (currently amended) The mixture of claim 104, wherein a) is tin metal ~~111, further comprising metal particles or metal alloy particles~~.

133. (currently amended) The mixture of claim 104, wherein a) is tin alloy ~~132, wherein said metal particles or metal alloy particles comprise at least one of aluminum, iron, cobalt, copper, molybdenum, nickel, niobium, silver, tantalum, titanium, vanadium, tungsten, zinc or tin~~.

134. (previously presented) The mixture of claim 104, further comprising E) at least one component chosen from d), f) or g), wherein

d) is at least one post-crosslinking compound,

f) is at least one corrosion protection pigment based on a silicate, whereby the corrosion protection pigments have an average particle size d_{50} in the range from 0.01 to 5 micron; and g) at least one of corrosion inhibitor which are not present in particle form.

135. (previously presented)A mixture according to claim 134, wherein said post-crosslinking compound d) is selected from the group consisting of isocyanate, blocked isocyanate, isocyanurate and a melamine resin.

136. (previously presented)A mixture according to claim 134, wherein the sum of the weight content of a) relative to the sum of the total pigmentation $\Sigma((a) + (f))$ is 30 to 99 wt.%.

137. (currently amended) A mixture according to claim 134, wherein ~~on addition to the mixture,~~ the corrosion protection particles f) have an average particle size d_{50} in the range from 0.01 to 5 μm.

138. (previously presented)A mixture according to claim 134, wherein the corrosion protection particles f) have the particle size passage value d_{80} in the range from 0.03 to 6 μm.

139. (previously presented)The mixture of claim 104, wherein the metal particles selected from the group consisting of tungsten, tantalum and niobium or an alloy thereof.

140. (previously presented)A process comprising the steps of:

applying the mixture of claim 139 to a substrate; and

drying or at least partly crosslinking the mixture to yield a coated substrate having, wherein the dry coating on the substrate has an average layer thickness in the dry state of not more than 6 μm, measured microscopically on a ground cross-section, and wherein the process is chromium free.